Remarks

The present amendment responds to the Official Action mailed January 28, 2003. The Official Action objected to the omission of a registered trademark symbol and the omission of capitalizing with respect to the trademark BLUETOOTH® in both the specification and claim 10. Claim 2 was objected to on the basis of its inclusion of an extraneous word. Claims 1-19 were rejected under 35 U.S.C. §102(e) as anticipated by Lewis et al. U.S. Patent No. 6,192,255 ("Lewis"). These issues are addressed below following a brief discussion of the present invention to provide context.

Claims 1, 18, and 19 have been amended to further address the transfer of processing of non critical time functions from the basic telephone module to the enhanced services module. Support can be found for this amendment at page 11, line 15 through page 11, line 23, for example. Claim 2 has been amended to remove the objected to extraneous word. Claim 10 has been amended to capitalize BLUETOOTH® and designate it as a registered trademark. Claim 17 has been amended to be more clear and distinct. Claims 20-24 have been added to more completely cover certain aspects of the present invention. Support for claims 20 and 21 can be found in the specification at page 9, lines 11-13. Support for claim 22-24 can be found in Fig. 2 and its discussion in the specification beginning at page 6, line 22 through to page 10, line 18. Consequently, no new matter has been added by this amendment. Claims 1-24 are presently pending.

The Present Invention

A wireless telephone according to an aspect of the present invention has two separate modules, each preferably comprising a processor, an accompanying chipset adapted for use with

and support of that processor and a separate internal bus for communication between the processor and chipset. The first module is a basic telephone module optimized for performing time critical processes needed for operation of a wireless telephone, and provides functionality comprising basic telephone functions with a minimum of non time critical enhanced features being handled thereby. The second module is an enhanced services module optimized for performing non time critical processes which both reduce the load on the first module and add features to the telephone. For example, the second module can add a second keypad and display and take over control of keypad and display functions thereby reducing the load on the first module. Additional functions not supported by the first module, such as programmable rings, speed dial, PDA functions and the like can also be added. The great majority of non time critical functions are managed by the enhanced services module, without a need for the basic telephone module to divert processing resources away from time critical processes.

The enhanced services module transfers data among supporting components on its internal bus preferably designed using standard PC architecture. The basic telephone module and the enhanced services module exchange instructions and data through an interface module. The interface module, basic telephone module and enhanced services module preferably include zero-insertion-force (ZIF) connectors so that a basic telephone module or an enhanced services module may be connected or removed, allowing connection of a basic telephone module to different enhanced services modules, or connection of an enhanced services module to different basic telephone modules. Among its several advantages, this arrangement allows a user to purchase and retain an enhanced services module suited to his or her needs, and then to use that enhanced services module with a different or upgraded basic telephone module.

Use of Trademark BLUETOOTH® in the Specification and Claim 10

The Examiner is thanked for his careful reading of the application. In accordance with the Examiner's suggestion, the trademark BLUETOOTH® has been capitalized and denoted as a registered trademark in both the specification and claim 10. Further, the paragraph beginning at page 5, line 16 has also been amended to refer to generic terminology.

Extraneous Word Objection in Claim 2

The Examiner is thanked for his careful reading of claim 2. Claim 2 has been amended by replacing "and also including" with "further comprising."

The Art Rejections

All of the art rejections hinge on the application of Lewis. As addressed in greater detail below, Lewis does not support the Official Action's reading of it and the rejections based thereupon should be reconsidered and withdrawn.

Claims 1-19 were rejected under 35 U.S.C. §102(e) as anticipated by Lewis. It is noted that Lewis is not admitted as being prior art. Lewis addresses a handheld communication device for wireless and land lines. Lewis, col. 2, lines 64-67. Referring to Figs. 7 and 8, Lewis's approach includes a bus 64, a processor 80; 280, and an application module 100. Each application module contains a microprocessor and associated electronic circuits to perform "different communication and information transfer functions." Lewis, col. 3, lines 5-9 (emphasis added). Referring to Figs. 7 and 8, as each application module is added to the handheld device, it appears that traffic contention on the single internal bus 64 will increase during non time critical communication between application modules.

In contrast to Lewis, the present invention includes two main modules a basic telephone module and an enhanced services module. Optimally, the basic telephone module performs time

critical functions associated with communicating through the air interface 136. The basic telephone module does not operate optimally when the enhanced services module is absent because the basic telephone module is then forced to perform some non time critical functions such as, for example, servicing the keypad 222 and display 224. As an example, upon connection of the enhanced service module, the basic telephone module detects the presence of the enhanced service module in order to disable the keypad 222 and display 224, leaving those non time critical functions to run on the enhanced services module, and allowing more of the basic telephone module's processing to be devoted to time critical functions.

Claim 1, as presently amended, recites "a basic telephone module for establishing a connection to a base station and processing voice and data for communication with the base station, the basic telephone module being operative to perform a group of time critical functions for communication with the base station and a group of non time critical functions; and an enhanced services module adapted to connect with the basic telephone module in order to perform the group of non time critical functions upon detection by the basic telephone module of the existence of the enhanced services module, the enhanced services module receiving data from the basic telephone module, processing the data and passing processed data to the basic telephone module during intervals when the basic telephone module has sufficient idle processing capacity available to receive the data." (emphasis added)

Further, the present invention advantageously provides additional features not supported by the basic module such as web browsing, programmable ring tones, PDA functions such as those associated with a personal organizer, enhanced keyboards, and the like to be readily added to the telephone by adding additional hardware or software to the enhanced services module.

Claim 11 recites "wherein the enhanced services module performs a worldwide web browser function to allow user communication over an Internet connection."

New dependent claim 20 recites "wherein the enhanced services module further comprises a keyboard." New dependent claim 21 recites "wherein the enhanced services module further comprises a keyboard."

New independent claim 22 recites "an interface module; an enhanced services module removeably attached to the interface module; and a basic telephone module removeably attached to the interface module function, the basic telephone module controls scheduling of data transfer between the basic telephone module and the enhanced services module by indicating when the basic telephone module is ready to receive data or interrupting operations being performed by the enhanced services module when the basic telephone module has data to send to the enhanced services module." New dependent claim 23 recites "[t]he wireless telephone of claim 22 wherein the basic telephone module detecting the presence of the enhanced services module upon the enhanced services module connection to the interface module in order to transfer processing of non time critical functions from running on the basic telephone module to running on the enhance services module thereby allowing more of the basic telephone module's processing to be devoted to time critical functions."

Unlike Lewis, the present invention alleviates bus contention on the basic telephone module by providing a separate internal bus in the enhanced services module. The advantages of this approach over that described by Lewis are evident when optional hardware is added to the expansion slots 244, 246, and 248 in the enhanced services module. Allocating an internal bus for non time critical applications such as speed dial and PDA functions, the optional hardware components can communicate over its reserved internal bus with each other to process their

respective functions and communicating only the final results over to the basic telephone module, thus minimizing the impact on internal bus contention in the basic telephone module.

New apparatus claim 24 recites " ... the basic telephone module having a first processor, a plurality of basic components needed for operation, and a first internal bus to communicate there between, ... the enhanced services module having a second processor, at least one optional hardware component and a second internal bus to communicate there between." Lewis does not disclose and does not teach having separate internal buses in its handheld device as claimed.

In further contrast to Lewis, independent method claim 17 addresses the situation where the basic telephone module performs a non time critical function while connected to the enhanced services module. In this aspect of the present invention, the enhanced services module receives data from the basic telephone module and stores this information. Storing this information in the enhanced services module provides the enhanced service module with the necessary data to perform the non time critical functions when the basic telephone module is disconnected from the enhanced services module. For example, subscriber information may be inputted using the keypad controlled by the basic telephone module. This subscriber information would be transferred to the enhanced services module when both modules are connected. When the basic telephone module is disconnected, the keypad controlled by the enhanced services module along with the stored subscriber information provides the user the ability to view or modify the subscriber information. Claim 17, as presently amended, recites "connecting a basic telephone module to an enhanced services module; receiving inputs from a user and transferring data between the basic telephone module and the enhanced services module; storing inputs in order to perform functions selected by the user in the absence of a communication connection

with a base station; transferring subscriber information from the enhanced services module to the basic telephone module..." Lewis does not disclose and does not teach this method of wireless communication as claimed in claim 17.

Independent method claims 18 and 19 address two methods of upgrading a wireless telephone. Claims 18 and 19, as presently amended, recite "...detecting the connection of the enhanced services module and transferring the processing of the group of non time critical function to the enhanced services module."

In contrast, Lewis addresses application modules which provide different functions than those performed by its processors 80 and 280. Lewis does not disclose and does not teach the detection of an enhanced services module and the transfer of non time critical functions from the basic telephone module to the enhanced services module as claimed.

Conclusion

All of the presently pending claims, as amended, appearing to define over the applied references, withdrawal of the present rejection and prompt allowance are requested.

Respectfully submitted,

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